

In the Claims

Applicants have submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 1-20 without prejudice or disclaimer.

1. – 20. (Canceled)

21. (Previously presented) An optical recording system comprising:
an air-incident optical disk compatible with flying optical heads, in which a recording layer is separated from a surface of the disk by intervening layers of a total thickness less than about 1 μ m and a composition such that the highest temperature of the surface during normal operation is less than the desorption temperature of water;

a flying optical head where the lowest facet of the lens element of the flying optical head is supported to float in close proximity to the surface of the disk and where the optical focus of the flying head is at the recording layer;

means of delivering a beam of light to the optical head so as to raise the recording layer to a temperature exceeding about 250°C;

means of optically detecting and differentiating the presence and absence of the mark as seen by the optical beam; and

tracking detection and feedback means to ensure that the optical beam can follow the path of the marks.

22. (Previously presented) The system of claim 21 where the air-incident disk uses a phase change recording layer.

23. (Previously presented) The system of claim 21 where the flying optical head comprises a solid immersion lens element having a spherical surface and substantially flat surface facing the disk.

24. (Original) The system of claim 21 wherein flying optical head utilizes evanescent coupling effects to decrease the spot size of the optical beam at the recording layer.

25. (Previously presented) In an air-incident optical recording medium which can be used with a flying optical head, the recording medium including a recording layer sensitive to heat produced by an optical beam which raises the recording layer to a temperature exceeding 250°C, a coating system less than 1 μm thick on the recording layer, between the recording layer and the flying optical head, the coating system having at least one layer whose thermal conductivity prevents a surface temperature from occurring when the recording layer is heated by the optical beam which can cause evaporation of molecules adsorbed therein from an ambient atmosphere.

26. (Original) The coating system of claim 25, further comprising plural layers, wherein evaporation of an outermost layer is prevented by the thermal conductivity of the at least one layer.

27. (Original) The coating system of claim 26, wherein the coating system comprises:

a dielectric overcoat layer; and
a protective overcoat layer.

28. (Original) The coating of claim 27, wherein the protective overcoat layer comprises a lubricant.

29. (Original) The coating of claim 28, wherein the protective overcoat further comprises a solid overcoat.

30. (Original) The coating of claim 27, wherein the dielectric overcoat layer is the at least one layer.

31. (Original) The coating of claim 30, wherein the protective overcoat layer has a thermal conductivity causing rapid dissipation of surface heat.